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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,056	11/25/2003	Ki Chul Cha	465-1094P	4192

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EXAMINER	
HECKERT, JASON MARK	

ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
11/21/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/720,056	CHA, KI CHUL	
	Examiner	Art Unit	
	JASON HECKERT	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,10,21 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,10,21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/8/08 has been entered.

Response to Arguments

2. Due to the applicant's amendments, the previous rejections are rendered moot.

3. Applicant has amended the claims to include "configured to" language. In view of these amendments, examiner presents newly found art.

4. Ultimately, the applicant has disclosed in the specification and claims a means for determining the amount of clothes in a washer/dryer and controlling the drying operations based on the amount of clothes (claim 10). In order to perform this function, the applicant discloses and claims a motor detecting part for measuring motor speed and a controlling part capable of comparing a measured speed characteristic to a preset stored speed characteristic.

5. Newly found art of Hashimoto contains disclosures that largely anticipate, and at the very least obviate, the means for detecting clothes load claimed in the instant application. Hashimoto (col. 5 line 45 to col. 6 line 8) teaches that there is a correlation between the rotating speed of a washing machine motor and the amount of clothes

contained within. Specifically, Hashimoto teaches that an input signal to the control circuit, Sm, could be a signal representing the speed of rotation of motor 8. "The greater the amount of laundry placed in rotating tub 4, the slower the speed of motor 8 will be. Thus, it is possible to determine the amount of laundry based on the speed of motor 8 indicated by signal Sm." Hashimoto continues, "Control circuit 26 decides, based on the above input, how much laundry is being washed. In the presently preferred embodiment, the laundry load is classified into one of four stages..." Thus, Hashimoto clearly teaches that the laundry load can be determined by the speed of the motor. Hashimoto also teaches comparing the input signal to four preset conditions indicative of laundry load, and then performing a control sequence based on one of said four preset conditions.

6. In regards to claim 1-3, 5-6, the applicant does not disclose structure indicative of air-drying (such as a fan, blower, etc.). Thus, Hashimoto's control sequence related to spin-drying is still relevant. Figure 5 teaches that for a high laundry weight, which would correspond to lesser rotational speed, the spin-dry stage is set for a collective 9 minutes of drying. For a medium weight, corresponding to a faster speed, the spin-dry stage is set for a collective 3.5 minutes of spin-drying. The values of spin-drying time continually decrease as the weight decreases (indicative of faster rotational speeds). Thus, Hashimoto teaches having drying time periods relevant to the stored weights (which were determined from speed signal Sm) and setting the drying time longer as the weight increases (corresponding to a signal Sm indicative of slower rotation speeds).

7. After a thorough search of the art, the examiner has found numerous cases of position and motor detectors (see prior art of Kenjo), controllers with memory and look-up tables (see Hashimoto and Payne), and combination washer/dryers (see prior art of Large). Thus, the structural limitations in the instant application are considered to be rendered obvious. In regards to the limitations drawn to the stored data and control scheme, Hashimoto provides clear teachings of the relationship between speed and load, and following control schemes based on a speed input signal indicative of load. As currently presented, the examiner fails to find patentable limitations contained within the claims.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 6 rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto. Hashimoto (col. 5 line 45 to col. 6 line 8) teaches that there is a correlation between the rotating speed of a washing machine motor and the amount of clothes contained within. Specifically, Hashimoto teaches that an input signal to the control circuit, Sm, could be a signal representing the speed of rotation of motor 8. "The greater the amount of laundry placed in rotating tub 4, the slower the speed of motor 8 will be. Thus, it is possible to determine the amount of laundry based on the speed of motor 8 indicated by signal Sm." Hashimoto continues, "Control circuit 26 decides,

based on the above input, how much laundry is being washed. In the presently preferred embodiment, the laundry load is classified into one of four stages..." Thus, Hashimoto clearly teaches that the laundry load can be determined by the speed of the motor. Hashimoto also teaches comparing the input signal to four presets indicative of laundry load, and then performing a control sequence based on one of said four presets.

10. Figure 5 teaches that for a high laundry weight, which would correspond to lesser rotational speed, the spin-dry stage is set for a collective 9 minutes of drying. For a medium weight, corresponding to a faster speed, the spin-dry stage is set for a collective 3.5 minutes of spin-drying. The values of spin-drying time continually decrease as the weight decreases (indicative of faster rotational speeds). Thus, Hashimoto teaches having drying time periods relevant to the stored weights (which were determined by a speed signal Sm) and setting the drying time longer as the weight increases (corresponding to a signal Sm indicative of slower rotation speeds).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto. Hashimoto discloses a motor 8, controller 26, and a motor sensing part capable of outputting signal Sm indicative of speed. Hashimoto also discloses storing

preset sequences in the controllers memory, and carrying out these sequences based on the input speed Sm. Hashimoto does not disclose comparing the detected speed value to the presets in an order of maximum value to minimum value. However, examiner believes the machine to be capable of operating in the same manner. The manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. *Ex parte Wikdahl* 10 USPQ 2d 1546, 1548 (BPAI 1989); *Ex parte McCullough* 7 USPQ 2d 1889, 1891 (BPAI 1988); *In re Finsterwalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235, 238 (CCPA 1967). Furthermore, apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.* 15 USPQ 2d 1525 (Fed. Cir. 1990); *Demaco Corp. v. F. Von Langsdorf Licensing Ltd.* 7 USPQ 2d 1222, 1224-1225 (Fed. Cir. 1988). Hashimoto at the very least obviates comparing signal Sm to stored presets. Comparing from a maximum to a minimum, or a minimum to a maximum, is considered to be obvious to one of ordinary skill in the art, absent the showing of unexpected results.

13. In regards to claim 21, Hashimoto teaches storing load sizes, and operating the control schemes based on the calculated load size, as opposed to relying on speed for the duration of the control scheme. However, as taught by Hashimoto, the speed and load size are inversely proportional. Thus, rotational speed is indicative of load size. Therefore, one of ordinary skill realizes that you can store weights (indicated by the speed) or speeds (which are indicative of the weights). Regardless of which variable is stored, an equivalent control scheme is accomplished.

14. Claims 7, 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Large, as evidenced by Chbat et al. Hashimoto discloses spin-drying but does not disclose a heater/blower unit for air-drying. Large discloses implementing a heater/blower unit (col. 3 lines 32-36) in a washer/dryer combo, which is well-known in the art. Such a device is utilized to dry laundry. Hashimoto teaches that as load increases, more spin drying is required to remove water. This is believed to be common sense to one of ordinary skill in the art, as more clothes absorb more water. This knowledge is relevant to air-drying as well, as more clothes would contain more water for removal. For evidence, see Chbat (col. 1 lines 25-33). Chbat discloses that, "the length of drying time required is a function of the weight of the load and the amount of water contained in the load." Thus, operating the drying heater and fan for a greater period of time for larger loads is considered to be obvious to one of ordinary skill in the art. The claimed elements were known in the prior art and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious at the time of the invention to modify Hashimoto and include a heater/blower unit, as disclosed by Large, in order to dry laundry.

15. Hashimoto also discloses storing preset sequences in the controllers memory, and carrying out these sequences based on the input speed Sm. Hashimoto does not disclose comparing the detected speed value to the presets in an order of maximum value to minimum value. However, examiner believes the machine to be capable of operating in the same manner. The manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. *Ex parte Wikdahl* 10 USPQ

2d 1546, 1548 (BPAI 1989); *Ex parte McCullough* 7 USPQ 2d 1889, 1891 (BPAI 1988); *In re Finsterwalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235, 238 (CCPA 1967). Furthermore, apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.* 15 USPQ 2d 1525 (Fed. Cir. 1990); *Demaco Corp. v. F. Von Langsdorf Licensing Ltd.* 7 USPQ 2d 1222, 1224-1225 (Fed. Cir. 1988). Hashimoto at the very least obviates comparing signal Sm to stored presets. Comparing from a maximum to a minimum, or a minimum to a maximum, is considered to be obvious to one of ordinary skill in the art, absent the showing of unexpected results.

16. In regards to claim 22, Hashimoto teaches storing load sizes, and operating the control schemes based on the calculated load size, as opposed to relying on speed for the duration of the control scheme. However, as taught by Hashimoto, the speed and load size are inversely proportional. Thus, rotational speed is indicative of load size. Therefore, one of ordinary skill realizes that you can store weights (indicated by the speed) or speeds (which are indicative of the weights). Regardless of which variable is stored, an equivalent control scheme is accomplished.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HECKERT whose telephone number is (571)272-2702. The examiner can normally be reached on Mon. to Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art Unit 1792

JMH